

| Notice of Allowability | Application No. | Applicant(s) |
|-------------------------------|---------------------------|-------------------|
| | 10/773,595 | WYSCHOGROD ET AL. |
| | Examiner Susan Y. Chen | Art Unit 2161 |

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 05/17/07.
2. The allowed claim(s) is/are 8.
3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. Notice of References Cited (PTO-892)
2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. Notice of Informal Patent Application
6. Interview Summary (PTO-413),
Paper No./Mail Date _____
7. Examiner's Amendment/Comment
8. Examiner's Statement of Reasons for Allowance
9. Other _____.

DETAILED ACTION

This office action is in response to the amendment filed on May 17, 2007.

Claim 8 is pending for examination. Claim 8 has been amended.

Terminal Disclaimer

The terminal disclaimers filed on 05/17/2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,856,981 has been reviewed and is accepted. The terminal disclaimer has been recorded.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

To the Application received on Feb. 06, 2004 please modify the following:

ABSTRACT

A system for determining the start of a match of a regular expression includes a special state table that contains start entries and terminal entries, and a set of start state registers for holding offset information. The system further includes a DFA next state table that, given the current state and an input character, returns the next state. A settable indicator is included in the DFA next state table corresponding to each next state table entry which indicates whether to perform a lookup in the special state table. A compiler loads values into the special state table based on the regular expression. A method for determining the start of a match of a regular expression using the special state table, the set of start state registers and the DFA next state table, includes the step of determining from the regular expression each start-of-match start state and each end-of-match terminal state. For each start state, a start state entry is loaded into the special state table. For each terminal state, a terminal state entry is loaded into each special state table. The next state table is used to return the next state from the current state and an input character. When a start state is encountered, the current offset from the beginning of the input character string is loaded into the start state register. When a terminal state is encountered, the terminal state entry is retrieved from the special state table, and the value of the start state register corresponding to the rule number of the terminal entry in the special state table is further retrieved. The value of the start state register which is retrieved indicates the location in the character string where the start-of-match occurred for a particular rule.

Allowable Subject Matter

Claim 8 is allowed.

The following is an examiner's statement of reasons for allowance:

Claim 1 is allowable because the prior art on record or that encountered in searching for the invention, fails to disclose or suggest the features of instant invention – a pattern recognition method to determine the processing of a multi-rule deterministic finite state automaton (DFA) for an input string. Wherein, each rule has pre-pending meta-characters “.*”, the automaton processing transforms each one of the multi-rule to a non-deterministic finite state automaton (NFA) using the Thompson Construction and analyzing the NFA to determine the state of the DFA by comparing the distances of the DFA start states that contains an NFA start state from a global state of the DFA for each rule, thereby creating a specific meta-NFA for storing in a memory and applying the final meta-NFA to conduct pattern matching in correspond to an input string, in a combination with all the limitations as claimed by applicant.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Y. Chen whose telephone number is 571-272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Susan Y Chen
Examiner
Art Unit 2161

Susan Chen

June 14, 2007